

ABSTRACT OF THE DISCLOSURE

5 A molecular system is provided for electric field activated switches, such as optical switches. The molecular system has an electric field induced band gap change that occurs via a molecular conformation change, based on a rotor/stator construction of the molecular system, involving a rotating portion (rotor) connected between two stationary portions (stators). Nanometer-scale reversible optical switches are thus provided that can be assembled easily to make a variety of optical devices, including optical displays.

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